

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-98801-1

TestAmerica Sample Delivery Group: DN0166

Client Project/Site: X17-052

For:

CH2M Hill Plateau Remediation Company

PO BOX 1600, MS H8-41

Richland, Washington 99352

Attn: Mr. Scot Fitzgerald

Darlene Bandy

Authorized for release by:

7/12/2017 5:33:47 PM

Darlene Bandy, Project Manager I

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

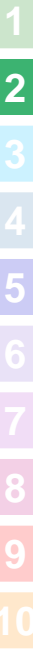
July 12, 2017

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Chain of Custody	4
Definitions	9
Method Summary	10
Sample Summary	11
Client Sample Results	12
QC Sample Results	13
QC Association	15



Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Job ID: 280-98801-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-98801-1

**SDG #: DN0166
SAF#(s): X17-052**

**Date SDG Closed: June 28, 2017
Data Deliverable: 30 Day / Summary**

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

LCS/LCSD = Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/29/2017 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 22.1° C.

TOTAL METALS (ICP)

Samples B39XN5 (280-98801-1), B39XN4 (280-98801-2) and B39XN3 (280-98801-3) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 07/06/2017 and analyzed on 07/06/2017 and 07/07/2017.

Iron, a common laboratory contaminant, was detected in method blank MB 280-379512/1-A at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged "B". Because the concentration in the method blank was not present at a level greater than the RL, corrective action is deemed unnecessary. If the associated samples reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged "C".

No additional analytical or quality issues were noted.

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager or designee and the laboratory's client services representative as verified by their signature on this report.

Reviewed and approved:

Darlene Bandy
Project Manager

July 12, 2017

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-98801-1

SDG Number: DN0166

Login Number: 98801

List Number: 1

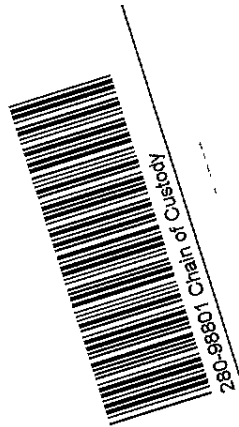
Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	22.1°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

July 12, 2017

CH2M Hill Plateau Remediation Company				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # X17-052-029	
ST 6/30/17 DN0166 DN0167								Page 1 of 1	
Collector	Juan Aguilar /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650				
SAF No.	X17-052	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064				
Project Title	Aquifer Tubes, June 2017	Logbook No.	HNF-N-506 84/24	Ice Chest No.	6055-436				
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	779517260821				
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	8116				
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			SPECIAL INSTRUCTIONS N/A		Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative	
B39XN5	N	W	6-28-17	0700	1x500-mL G/P	6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2	



Relinquished By Juan Aguilar /CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 0950	Received By Janelle Zunker /CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 0950	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WT = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By Janelle Zunker /CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 1400	Received By Janelle Zunker /CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 1400	
Relinquished By FedEx	Print [Signature]	Sign JUN 28 2017	Date/Time 1400	Received By Janelle Zunker /CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 1400	
Relinquished By	Print [Signature]	Sign JUN 28 2017	Date/Time 1400	Received By	Print [Signature]	Sign JUN 28 2017	Date/Time 1400	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By Date/Time				

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July 12, 2017

CH2M Hill Plateau Remediation Company				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# X17-052-028	
55 6120117 D120166								Page 1 of 1	
Collector	Juan Aguilar /CHPRC		Contact/Requester		Karen Waters-Husted		Telephone No.	509-376-4650	
SAF No.	X17-052		Sampling Origin		Hanford Site		Purchase Order/Charge Code	303064	
Project Title	Aquifer Tubes, June 2017		Logbook No.		HNF-N-506 84 / 24		Ice Chest No.	605434	
Shipped To (Lab)	TestAmerica Denver		Method of Shipment		Commercial Carrier		Bill of Lading/Air Bill No.	779517260871	
Protocol	CERCLA		Priority:	30 Days	PRIORITY		Offsite Property No.	8116	
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1				SPECIAL INSTRUCTIONS N/A		Hold Time		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative	
B39XN4	N	W	6-28-17	0823	1x500-mL G/P	6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2	

Relinquished By Juan Aguilar /CHPRC	Print 	Sign JUN 28 2017	Date/Time 0950	Received By Janelle Zunker /CHPRC	Print 	Sign JUN 28 2017	Date/Time 0950	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WI = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By Janelle Zunker /CHPRC	Print 	Sign JUN 28 2017	Date/Time 1400	Received By Janelle Zunker /CHPRC	Print 	Sign JUN 28 2017	Date/Time 1400		
Relinquished By FedEx	Print 	Sign JUN 28 2017	Date/Time 1400	Received By Josh True	Print 	Sign JUN 28 2017	Date/Time 0840		
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time		
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	
PRINTED ON 4/26/2017				FSR ID = FSR44621				A-5004-842 (REV 2)	

July 12, 2017

CH2M Hill Plateau Remediation Company				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # X17-052-027	
6/30/17 000166 00067								Page 1 of 1	
Collector	Juan Aguilar CHPRC			Contact/Requester	Karen Waters-Husted			Telephone No.	509-376-4650
SAF No.	X17-052			Sampling Origin	Hanford Site			Purchase Order/Charge Code	303064
Project Title	Aquifer Tubes, June 2017			Logbook No.	HNF-N-506 84 / 24			Ice Chest No.	6035-4360
Shipped To (Lab)	TestAmerica Denver			Method of Shipment	Commercial Carrier			Bill of Lading/Air Bill No.	779517260871
Protocol	CERCLA			Priority:	30 Days	PRIORITY	Offsite Property No.	8116	
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1				SPECIAL INSTRUCTIONS N/A		Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative	
B39XN3	N	W	6.28-17	0813	1x500-mL G/P	6010_METALS_ICP: GW 04	6 Months	HNO3 to pH <2	

Relinquished By Juan Aguilar CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 0950	Received By Janelle Zunker CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 0950	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge W1 = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By Janelle Zunker CHPRC	Print [Signature]	Sign JUN 28 2017	Date/Time 1600	Received By	Print FEDEX	Sign	Date/Time	
Relinquished By	Print [Signature]	Sign FedEx	Date/Time	Received By Josh True	Print [Signature]	Sign 6/29/17	Date/Time 0810	
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By Date/Time				



July 12, 2017

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779517260871

Ship date:

Wed 6/28/2017

Actual delivery:

Thu 6/29/2017 8:35 am

Richland, WA US

Delivered

Signed for by: J.TRUE

ARVADA, CO US

Travel History

Date/Time	Activity	Location
6/29/2017 - Thursday		
8:35 am	Delivered	ARVADA, CO
8:24 am	On FedEx vehicle for delivery	ARVADA, CO
7:22 am	At local FedEx facility	ARVADA, CO
4:58 am	At destination sort facility	DENVER, CO
3:55 am	Departed FedEx location	MEMPHIS, TN
12:24 am	Arrived at FedEx location	MEMPHIS, TN
6/28/2017 - Wednesday		
4:47 pm	Left FedEx origin facility	PASCO, WA
3:21 pm	Shipment information sent to FedEx	
3:18 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	779517260871	Service	FedEx Priority Overnight
Weight	13 lbs / 5.9 kgs	Signature services	Direct signature required
Delivered To	Receptionist/Front Desk	Total pieces	1
Total shipment weight	13 lbs / 5.9 kgs	Terms	Third Party
Shipper reference	PTR#8116	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required	Standard transit	6/29/2017 by 10:30 am

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Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyzed for but not detected.
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 5X$ the blank concentration.
B	Estimated result. Result is less than the RL, but greater than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

July 12, 2017 Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-98801-1	B39XN5	Water	06/28/17 11:47	06/29/17 08:40
280-98801-2	B39XN4	Water	06/28/17 11:47	06/29/17 08:40
280-98801-3	B39XN3	Water	06/28/17 11:36	06/29/17 08:40

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TestAmerica Denver

July 12, 2017 Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Method: 6010C - Metals (ICP)

Client Sample ID: B39XN5
Date Collected: 06/28/17 11:47
Date Received: 06/29/17 08:40

Lab Sample ID: 280-98801-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	U	100	4.4	ug/L		07/06/17 07:02	07/07/17 14:37	1
Calcium	34.5	U	200	34.5	ug/L		07/06/17 07:02	07/06/17 18:41	1
Iron	22.0	U	100	22.0	ug/L		07/06/17 07:02	07/06/17 18:41	1
Magnesium	10.7	U	200	10.7	ug/L		07/06/17 07:02	07/06/17 18:41	1
Potassium	237	U	3000	237	ug/L		07/06/17 07:02	07/06/17 18:41	1
Sodium	117	U	1000	117	ug/L		07/06/17 07:02	07/06/17 18:41	1
Vanadium	1.1	U	10.0	1.1	ug/L		07/06/17 07:02	07/06/17 18:41	1

Client Sample ID: B39XN4
Date Collected: 06/28/17 11:47
Date Received: 06/29/17 08:40

Lab Sample ID: 280-98801-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	47.5	B	100	4.4	ug/L		07/06/17 07:02	07/07/17 14:52	1
Calcium	19000		200	34.5	ug/L		07/06/17 07:02	07/06/17 18:56	1
Iron	380	C	100	22.0	ug/L		07/06/17 07:02	07/06/17 18:56	1
Magnesium	4010		200	10.7	ug/L		07/06/17 07:02	07/06/17 18:56	1
Potassium	2040	B	3000	237	ug/L		07/06/17 07:02	07/06/17 18:56	1
Sodium	32800		1000	117	ug/L		07/06/17 07:02	07/06/17 18:56	1
Vanadium	6.8	B	10.0	1.1	ug/L		07/06/17 07:02	07/06/17 18:56	1

Client Sample ID: B39XN3
Date Collected: 06/28/17 11:36
Date Received: 06/29/17 08:40

Lab Sample ID: 280-98801-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	48.3	B	100	4.4	ug/L		07/06/17 07:02	07/07/17 14:55	1
Calcium	21100		200	34.5	ug/L		07/06/17 07:02	07/06/17 18:59	1
Iron	451	C	100	22.0	ug/L		07/06/17 07:02	07/06/17 18:59	1
Magnesium	4600		200	10.7	ug/L		07/06/17 07:02	07/06/17 18:59	1
Potassium	1990	B	3000	237	ug/L		07/06/17 07:02	07/06/17 18:59	1
Sodium	26300		1000	117	ug/L		07/06/17 07:02	07/06/17 18:59	1
Vanadium	6.5	B	10.0	1.1	ug/L		07/06/17 07:02	07/06/17 18:59	1

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-379512/1-A
Matrix: Water
Analysis Batch: 380056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 379512

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34.5	U	200	34.5	ug/L		07/06/17 07:02	07/06/17 18:35	1
Iron	27.22	B	100	22.0	ug/L		07/06/17 07:02	07/06/17 18:35	1
Magnesium	10.7	U	200	10.7	ug/L		07/06/17 07:02	07/06/17 18:35	1
Potassium	237	U	3000	237	ug/L		07/06/17 07:02	07/06/17 18:35	1
Sodium	117	U	1000	117	ug/L		07/06/17 07:02	07/06/17 18:35	1
Vanadium	1.1	U	10.0	1.1	ug/L		07/06/17 07:02	07/06/17 18:35	1

Lab Sample ID: MB 280-379512/1-A
Matrix: Water
Analysis Batch: 380203

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 379512

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	U	100	4.4	ug/L		07/06/17 07:02	07/07/17 14:31	1

Lab Sample ID: LCS 280-379512/2-A
Matrix: Water
Analysis Batch: 380056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 379512

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	50640		ug/L		101	80 - 120
Iron	1000	1052		ug/L		105	80 - 120
Magnesium	50000	50140		ug/L		100	80 - 120
Potassium	50000	51700		ug/L		103	80 - 120
Sodium	50000	54050		ug/L		108	80 - 120
Vanadium	500	507.9		ug/L		102	80 - 120

Lab Sample ID: LCS 280-379512/2-A
Matrix: Water
Analysis Batch: 380203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 379512

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1000		ug/L		100	80 - 120

Lab Sample ID: 280-98801-1 MS
Matrix: Water
Analysis Batch: 380056

Client Sample ID: B39XN5
Prep Type: Total/NA
Prep Batch: 379512

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	34.5	U	50000	50920		ug/L		102	75 - 125
Iron	22.0	U	1000	1077		ug/L		108	75 - 125
Magnesium	10.7	U	50000	51800		ug/L		104	75 - 125
Potassium	237	U	50000	51610		ug/L		103	75 - 125
Sodium	117	U	50000	53960		ug/L		108	75 - 125
Vanadium	1.1	U	500	524.1		ug/L		105	75 - 125

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-98801-1 MS

Matrix: Water

Analysis Batch: 380203

Client Sample ID: B39XN5

Prep Type: Total/NA

Prep Batch: 379512

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	4.4	U	1000	988.0		ug/L		99	75 - 125

Lab Sample ID: 280-98801-1 MSD

Matrix: Water

Analysis Batch: 380056

Client Sample ID: B39XN5

Prep Type: Total/NA

Prep Batch: 379512

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	34.5	U	50000	49710		ug/L		99	75 - 125	2	20
Iron	22.0	U	1000	1028		ug/L		103	75 - 125	5	20
Magnesium	10.7	U	50000	48880		ug/L		98	75 - 125	6	20
Potassium	237	U	50000	50720		ug/L		101	75 - 125	2	20
Sodium	117	U	50000	52890		ug/L		106	75 - 125	2	20
Vanadium	1.1	U	500	494.1		ug/L		99	75 - 125	6	20

Lab Sample ID: 280-98801-1 MSD

Matrix: Water

Analysis Batch: 380203

Client Sample ID: B39XN5

Prep Type: Total/NA

Prep Batch: 379512

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	4.4	U	1000	1028		ug/L		103	75 - 125	4	20

July 12, 2017 QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-052

TestAmerica Job ID: 280-98801-1
SDG: DN0166

Metals

Prep Batch: 379512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98801-1	B39XN5	Total/NA	Water	3010A	
280-98801-2	B39XN4	Total/NA	Water	3010A	
280-98801-3	B39XN3	Total/NA	Water	3010A	
MB 280-379512/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-379512/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-98801-1 MS	B39XN5	Total/NA	Water	3010A	
280-98801-1 MSD	B39XN5	Total/NA	Water	3010A	

Analysis Batch: 380056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98801-1	B39XN5	Total/NA	Water	6010C	379512
280-98801-2	B39XN4	Total/NA	Water	6010C	379512
280-98801-3	B39XN3	Total/NA	Water	6010C	379512
MB 280-379512/1-A	Method Blank	Total/NA	Water	6010C	379512
LCS 280-379512/2-A	Lab Control Sample	Total/NA	Water	6010C	379512
280-98801-1 MS	B39XN5	Total/NA	Water	6010C	379512
280-98801-1 MSD	B39XN5	Total/NA	Water	6010C	379512

Analysis Batch: 380203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98801-1	B39XN5	Total/NA	Water	6010C	379512
280-98801-2	B39XN4	Total/NA	Water	6010C	379512
280-98801-3	B39XN3	Total/NA	Water	6010C	379512
MB 280-379512/1-A	Method Blank	Total/NA	Water	6010C	379512
LCS 280-379512/2-A	Lab Control Sample	Total/NA	Water	6010C	379512
280-98801-1 MS	B39XN5	Total/NA	Water	6010C	379512
280-98801-1 MSD	B39XN5	Total/NA	Water	6010C	379512